IN THE CLAIMS

Please amend the claims as follows.

1.-20. (Cancelled).

21. (Currently Amended) A system comprising:

a plurality of actuators distributed in a cross-machine direction of a sheet-making machine at respective fixed positions over a sheet of material, each actuator operable to perform (i) a first control action with a magnitude on a slice of the sheet and (ii) a second control action to manipulate a cross-directional shape within the slice, each actuator controllable to vary one or more properties of the sheet by varying both the magnitude and the cross-directional shape within the slice;

at least one scanner operable to measure the one or more properties of the sheet; and

a controller in communication with the at least one scanner and operable to calculate the first and second control actions for each actuator and to implement the first and second control actions at each actuator such that the actuators co-operate to adjust the one or more properties of the sheet to one or more desired targets;

wherein each actuator comprises a steam actuator having an outlet chamber for releasing steam to the sheet; and

wherein dimensions of the outlet chamber in each steam actuator are adjustable to control the cross-directional shape within the slice associated with that steam actuator.

22. (Cancelled).

23. (Currently Amended) The system of claim [[22]] 21, wherein the outlet chamber of each steam actuator includes at least one baffle plate which is movable to control a cross-directional position and the dimensions of that outlet chamber.

24. (Currently Amended) A system comprising: ~~The system of claim 21,~~

a plurality of actuators distributed in a cross-machine direction of a sheet-making machine at respective fixed positions over a sheet of material, each actuator operable to perform (i) a first control action with a magnitude on a slice of the sheet and (ii) a second control action to manipulate a cross-directional shape within the slice, each actuator controllable to vary one or more properties of the sheet by varying both the magnitude and the cross-directional shape within the slice;

at least one scanner operable to measure the one or more properties of the sheet; and

a controller in communication with the at least one scanner and operable to calculate the first and second control actions for each actuator and to implement the first and second control actions at each actuator such that the actuators co-operate to adjust the one or more properties of the sheet to one or more desired targets;

wherein each actuator comprises a steam actuator having:

an outlet chamber for releasing steam to the sheet;

a screen plate with openings covering the outlet chamber; and

at least one movable plate, wherein movement of the at least one movable plate with respect to the screen plate acts to fully or partially obstruct the openings in the screen plate.

25. (Currently Amended) A system comprising: ~~The system of claim 21,~~

a plurality of actuators distributed in a cross-machine direction of a sheet-making machine at respective fixed positions over a sheet of material, each actuator operable to perform (i) a first control action with a magnitude on a slice of the sheet and (ii) a second control action to manipulate a cross-directional shape within the slice, each actuator controllable to vary one or more properties of the sheet by varying both the magnitude and the cross-directional shape within the slice;

at least one scanner operable to measure the one or more properties of the sheet; and

a controller in communication with the at least one scanner and operable to calculate the first and second control actions for each actuator and to implement the first and second control actions at each actuator such that the actuators co-operate to adjust the one or more properties of the sheet to one or more desired targets;

wherein each actuator comprises a steam actuator having an outlet chamber for releasing a flow of steam to the sheet; and

wherein at least one air jet associated with the outlet chamber is dischargable to control a cross-directional shape of the steam flow.

26.-33. (Cancelled).

34. (Previously Presented) The system of claim 21, wherein each actuator is operable individually to perform the first control action and the second control action.

35. (Previously Presented) The system of claim 21, wherein each actuator is controllable to vary the one or more properties of the sheet by simultaneously varying both the magnitude and the cross-directional shape within the slice; and

wherein the controller is operable to implement the first and second control actions simultaneously at each of the actuators.

36. (Previously Presented) A system comprising:

a plurality of steam actuators distributed in a cross-machine direction of a sheet-making machine over a sheet of material, each steam actuator having an outlet chamber formed by a space between a first plate, a second plate and an outer wall, wherein the first plate is designed to contain a nozzle through which steam is received, and wherein the second plate contains a plurality of openings to allow passage of the steam received from the nozzle onto the sheet, the outlet chamber in each steam actuator operable to release steam of a magnitude and to manipulate a cross-directional shape within a slice of the sheet, the outlet chamber in each steam actuator controllable to release steam to vary both the magnitude and the cross-directional shape within the slice;

at least one scanner operable to measure one or more properties of the sheet; and

a controller in communication with the at least one scanner and operable to calculate the magnitude and the cross-directional shape for each steam actuator and to cause each outlet chamber to release steam with a corresponding magnitude and cross-directional shape such that the steam actuators co-operate to adjust the one or more properties of the sheet to one or more desired targets.

37. (Previously Presented) The system of claim 36, wherein the outlet chamber of each steam actuator includes at least one baffle plate which is movable to control dimensions of that outlet chamber, which in turn causes release of steam with the corresponding cross-directional shape by that outlet chamber.

38. (Previously Presented) The system of claim 36, wherein each outlet chamber further includes at least one movable plate, and wherein movement of the at least one movable plate with respect to the second plate of that outlet chamber acts to fully or partially obstruct the plurality of openings in the second plate of that outlet chamber, thereby causing release of steam with the corresponding cross-directional shape by that outlet chamber.

39. (Previously Presented) The system of claim 36, wherein each outlet chamber is operable to release a flow of steam and includes at least one air jet, the at least one air jet dischargable to control a shape of the steam flow from that outlet chamber.

40. (Withdrawn and Currently Amended) A system comprising:

a steam actuator associated with an outlet chamber, the steam actuator operable to release steam of an adjustable magnitude and in an adjustable cross-directional shape through the outlet chamber, the steam actuator located over a sheet of material produced by a sheet-making machine, the steam actuator controllable to vary one or more properties of the sheet by varying both the magnitude and the cross-directional shape of the steam;

a scanner operable to measure the one or more properties of [[a]] the sheet of material; and

a controller in communication with the scanner and operable to identify a specified magnitude and a specified cross-directional shape for the steam based on measurements from the scanner, the controller also operable to cause the steam actuator to release steam of the specified magnitude and in the specified cross-directional shape such that the steam actuator adjusts the one or more properties of the sheet of material;

wherein dimensions of the outlet chamber are adjustable to control the cross-directional shape of the steam within a slice of the sheet of material.

41.-42 (Cancelled).

43. (Withdrawn and Currently Amended) A system comprising: ~~The system of Claim 42, wherein the outlet chamber includes~~

a steam actuator operable to release steam of an adjustable magnitude and in an adjustable cross-directional shape, the steam actuator located over a sheet of material produced by a sheet-making machine, the steam actuator controllable to vary one or more properties of the sheet by varying both the magnitude and the cross-directional shape of the steam;

a scanner operable to measure the one or more properties of the sheet of material; and

a controller in communication with the scanner and operable to identify a specified magnitude and a specified cross-directional shape for the steam based on measurements from the scanner, the controller also operable to cause the steam actuator to release steam of the specified magnitude and in the specified cross-directional shape such that the steam actuator adjusts the one or more properties of the sheet of material;

wherein the steam actuator comprises:

an outlet chamber for releasing the steam to the sheet;

a screen plate with openings covering the outlet chamber; and

at least one movable plate, [[; and]] wherein movement of the at least one movable plate with respect to the ~~second~~ screen plate acts to fully or partially obstruct the openings in the ~~second~~ screen plate.

44. (Withdrawn and Previously Presented) The system of Claim 40, wherein the outlet chamber includes at least one baffle plate that is movable to control dimensions of the outlet chamber.

45. (Withdrawn and Currently Amended) A system comprising: ~~The system of Claim 40,~~

a steam actuator operable to release steam of an adjustable magnitude and in an adjustable cross-directional shape, the steam actuator located over a sheet of material produced by a sheet-making machine, the steam actuator controllable to vary one or more properties of the sheet by varying both the magnitude and the cross-directional shape of the steam;

a scanner operable to measure the one or more properties of the sheet of material; and

a controller in communication with the scanner and operable to identify a specified magnitude and a specified cross-directional shape for the steam based on measurements from the scanner, the controller also operable to cause the steam actuator to release steam of the specified magnitude and in the specified cross-directional shape such that the steam actuator adjusts the one or more properties of the sheet of material;

wherein the steam actuator comprises an outlet chamber that is operable to release a flow of steam and includes at least one air jet, the at least one air jet adjustable to control the cross-directional shape of the steam flow.

46. (Withdrawn and Previously Presented) The system of Claim 40, wherein:

the system comprises multiple steam actuators; and

the controller is operable to identify the specified magnitude and the specified cross-directional shape for the steam released by each of the multiple steam actuators.

47.-54. (Cancelled).